ABSTRACT

TITLE: CLINICAL EFFECTIVENESS OF SUBGINGIVALLY DELIVERED ROSUVASTATIN IN COMPARISON WITH ATORVASTATIN IN THE TREATMENT OF CHRONIC PERIODONTITIS

Background: Periodontal disease occurs as a consequence of the host immune inflammatory response to oral pathogens. The treatment modalities available to achieve the goal of periodontal therapy includes scaling and root planing alone, or scaling and root planing with systemic or local antimicrobial/anti-inflammatory agents, and surgical periodontal therapy. This randomized, double blind, controlled clinical trial evaluates the efficacy of 1.2% Rosuvastatin in comparison with 1.2% Atorvastatin as local drug delivery in adjunct to scaling and root planing for the treatment of chronic periodontitis.

Materials & Methods: Thirty patients requiring treatment for generalized chronic periodontitis were enrolled. They were divided into three groups of ten each. One site per patient is selected for local drug delivery. Clinical parameters and Radiographs were also recorded at baseline and 6 months.

Results: The results obtained for the Atorvastatin and Rosuvastatin groups were comparable to that of the placebo group. This shows that the subgingival delivery of Atorvastatin and Rosuvastatin did not give any statistically significant improvement in the clinical and radiographic parameters after a period of 6 months.

Conclusion: From the findings of the study, we elucidate that treating chronic periodontitis with subgingivally delivered Atorvastatin and Rosuvastatin as an adjunct to scaling and root planing

did not demonstrate any positive results clinically as well as radiographically. Keeping in mind the numerable research demonstrating the pleiotropic effects of statins further research need to be conducted on the effectiveness of *in situ* gel systems for the local drug delivery of statins. Ongoing and future investigations in this area should focus on establishing the molecular basis for the treatment of periodontal disease with statins by designing more stringently controlled interventional studies.

Key words: Chronic periodontitis; Atorvastatin; Rosuvastatin; Subgingival drug delivery.